

WOOD'S GRIST MILL
South bank of the Indian River,
.1 mile east of the breached mill dam
Antwerp Vicinity
Jefferson County
New York

HAER NO. NY-191

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
Philadelphia Support Office
200 Chestnut Street
Philadelphia, Pennsylvania 19106

HISTORIC AMERICAN ENGINEERING RECORD
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LOCATION: South bank of the Indian River, approximately
.1 mile east of the breached mill dam,
Antwerp Vicinity, Jefferson County, New York

UTM: 18.453719.4885378
Quad: North Wilna, NY

DATE OF 'CONSTRUCTION: ca. 1860

PRESENT OWNER: United States Army, 10th Mountain
Division, Fort Drum, New York.

PRESENT USE: Abandoned

SIGNIFICANCE: Although consisting largely of ruins,
Woods Mill still possesses the ability
to stand as a representative example of
a grist milling enterprise, an
industrial activity widespread in rural
Jefferson County during the 19th
century. The mill was established by
Jonathan Wood, who appears to have been
the original "developer" of the water
power potential at this location. The
presence of water power fostered the
emergence of a small rural industrial
"village", known as Woods Settlement or
Woods Mills. Although the precise date
of the grist mill is not known, it is
known that it was in operation by 1860
and as late as 1898, suggesting the
continued importance of the milling
industry to the surrounding agricultural
community and region.

PROJECT INFORMATION: Wood's Grist Mill was recorded by the
Cultural Resource Group of Louis Berger
& Associates, Inc. in May 1988, for the
National Park Service, Mid-Atlantic
Region, Philadelphia; and for the 10th
Mountain Division, U.S. Army, Fort Drum,
New York. The project team consisted of
Martha H. Bowers, Architectural Histo-
rian; Rob Tucher, Photographer; Alain
Outlaw and Henry Holt, Archaeologists;
Catherine Shaddock, Research Assistant;
and John R. Bowie, A.I.A., Consulting
Architect.

DESCRIPTION

The subject of this documentation is the remains of a grist mill situated on the Indian River in the former village of Woods Settlement in the town of Woodsmill Jefferson County, New York. Woods Settlement is contained within that portion of Jefferson County which, along with a part of adjacent Lewis County, has constituted the U.S. Army's Fort Drum Reservation since 1942.

The Woods Settlement townsite, long abandoned and its buildings razed, occupied land on both sides of the river. Fragments of rubble stone abutments, now incorporated into the wingwalls of a modern concrete and steel deck structure, indicate the presence of an earlier bridge which spanned the river to provide passage from one portion of the village to the other.

The mill ruin is situated on the south bank of the river, between the bridge and the breached mill dam, which is located approximately 100 feet west of, and upstream from, the bridge. On the north bank, remains of the rubble stone north abutment of the dam are still visible, as are concrete and stone fragments of the spillway. A longer (45-foot) section of the spillway exists on the south bank of the river. The inclined upstream side of the spillway is constructed of coursed rubble sandstone with a coarse cement mortar, overlain by a one-inch layer of concrete. The vertical downstream face is more roughly constructed of uncoursed rubble, the material held in place by large areas of concrete which appear to represent maintenance and repair efforts undertaken on the dam during its useful life. Beyond the south end of the spillway is a long dam section of rubble stone, approximately 80 feet long, which appears to have been built in two stages.

At the point where the concreted spillway and rubble stone dam segment meet is a gate structure through which water was drawn off from the slackwater and conveyed to the grist mill. The gate structure is built of coursed rubble sandstone around which formwork was placed and filled with concrete. This gate structure consists of two walls 10 feet apart on centers which extend approximately 18 feet downstream from the spillway. On the inner surfaces of the walls, at intervals of 3 to 4 feet, are vertical channels from which the heads of large nails protrude. The orientation of the gate structure places it directly opposite the center of the west wall of the grist mill, the distance between the lower end of the gate structure and the mill being about 35 feet. The mill itself is represented now by perimeter walls enclosing the cellar and very lowest portion of a first floor. The walls form a rectangle of roughly 34 feet (east-west) by 28 feet (north-south) exterior dimension. Inside, the walls extend between 7 and 9 feet above the surface of the silt which

now covers the basement floor. The inner planes of the east and south walls, and of a portion of the north wall, are stepped back to form a ledge approximately 2 feet wide, above which the walls are approximately 3-1/2 feet thick. Shallow but clearly discernable depressions in the tops of the south and north walls appear to represent the respective locations of door and window sills. On the north wall, toward the northeast corner, is the opening for the tailrace, spanned by a single extremely large stone. Two runner stones lie in the silt at the west end of the mill. Both are constructed of granite, the stones of each held in place by a single wide metal band. One is a French buhr, of approximately 4-foot diameter, with four carefully cut eyestones arranged around an 11-1/2-inch eye with four "notches". These "notches" mark the location where the driver and balance ryne were positioned; these elements, which are typical of runner stones (but no longer present at the site) acted to balance the runner stone above the bed stone and to drive it rotationally. The other stone of similar diameter, is of a locally quarried stone, with a single eyestone and more dramatically-tapered eye lined with a metal cuff.

The west wall of the mill consists of three sections. In the north section, the sandstone is relatively carefully coursed and forms a distinct batter at the base of the northwest corner, while the south section is more crudely laid up. The central section of the wall is set off from the north portion by vertical joints in masonry. A 2x4-inch plank with large nails is inserted in the joint between the north and central sections, while the joint between the central and south sections is filled with mortar. At the base of the center section are two openings. The sides of these openings, as well as both sides of the stone wall above them, are covered by thick layers of concrete.

HISTORICAL BACKGROUND

(Note: This historical background has been largely excerpted from two technical reports prepared for the National Park Service and the United States Army in support of cultural resource investigations on the Fort Drum Military Reservation; see Friedlander et al. 1986:2-1 - 21; and Friedlander et al. 1988:19-24.)

The earliest settlement in the vicinity of Fort Drum is associated with Long Falls (now Carthage), which was surveyed and settled between 1793 and 1798 (Powell 1976:119). Until the 1790s, this area was generally known as the "North County", and tensions between the United States and Great Britain, chaotic land policies, and unstable currencies all worked to inhibit permanent occupation of the area (Powell 1976:16). New York

State's land policies, established in 1786, regulated survey and sale of public lands and excepted purchasers from taxation for seven years after acquisition as long as the land was settled within that period. This resulted in a period of land speculation along the frontier (Powell 1976:17).

In 1791, Alexander Macomb, who had already made one fortune in the fur trade as John Jacob Astor's partner, bought 1,920,000 acres, comprising most of Franklin, St. Lawrence and Jefferson Counties, and all of Lewis County (Powell 1976:113). Macomb soon went bankrupt and one of his partners, William Constable, had to sell off their holdings. Constable peddled some of the tracts to friends in New York and then went to France in 1792 to try to sell property to wealthy Frenchmen, eager to leave France following the fall of the Bastille in 1789. Among these was James LeRay, whose father had been active in 18th century transatlantic commerce and had supported the American Revolution, and who had already become an American citizen in 1788. LeRay introduced Constable to his brother-in-law, Paul Chassanis. With LeRay, Chassanis formed the Castorland Company, and in August 1792, he and Constable executed a deed for 630,000 acres in what eventually became Lewis and Jefferson Counties (Powell 1976:117-119).

Unfortunately, the deal went sour. In March of the following year, Constable sold Chassanis 210,000 acres in the area approximately bounded by Rome, Watertown, the Black River and Lake Ontario. One city, Basle, was projected in the Black River valley near Lake Ontario; the sale eventually led to the founding of Long Falls between 1793 and 1798 and settlement of 20 French aristocratic families in Castorland between 1796 and 1800. In 1798, however, the New York Legislature rescinded permission for French citizens to hold property in New York. LeRay acquired all of Castorland; the settlers went home to France, where they were welcomed back by their government in 1800. By 1804, the area was nearly deserted. They left behind 82 acres of cleared land, 18 log cabins, 1 saw mill, and several unusable roads (Powell 1976:1804).

James LeRay returned to France in 1790 to settle his father's affairs, and he came back to the United States in 1802 (Fort Drum Public Affairs Office 1981:n.p.; Powell 1976:141). Two years earlier, he had purchased 220,000 acres (previously part of the Chassanis holdings) from the Antwerp Company (Fort Drum Public Affairs Office 1981:n.p.). In 1802, LeRay took over the rest of the Chassanis tract and then sold some of his immense holdings to a group of Pennsylvania Quakers, who founded the town of Philadelphia (Powell 1976:141).

Although the French abandoned their settlement at Long Falls by 1804, pioneers from Connecticut, Vermont and Massachusetts began to trickle into Jefferson County between 1779 and 1800, settling primarily south of the Black River. Noadiah Hubbard made the first permanent settlement in Champion in 1798, and Lyman Ellis founded Ellisburg the same year. Two years later, Henry Coffeen, Hart Massey and others settled Watertown, and in 1802 a dam was built across the Black River at the foot of Mill Street in that village. Pioneers were primarily Congregationalists, although some Quakers migrated from Pennsylvania and a few Baptists from Long Island. In search of fertile farmland, they settled in family and small community groups and were self-governed on the New England model until the area was organized by the state in 1798 as part of Oneida County (Gould, comp. 1955:13; Powell 1976:145).

The presence of mills occurs repeatedly in the early histories of small towns and villages in the area. Sawmills were found on Pleasant Creek in LeRaysville by 1802, and on Black Creek, one and a half miles above the future site of Sterlingville, by 1807 (DeLaire 1977:n.p.). An early, but undated, survey of Champion shows Gardners' Mills and Great Bend Bridge on the Black River (Map of Black River Tract, Township 4, Jefferson County, n.d., on file at New York State Department of Tax and Finance, Albany).

By 1810, Jefferson and Lewis Counties had been created out of Oneida. As of 1820, there were 54 gristmills in Jefferson County, of which one was in Antwerp, five were in Champion, seven were in LeRay, one was in Philadelphia, five were in Watertown, and two were in Wilna. The number of sawmills (107) in the county exceeded the number of gristmills, and were also usually more frequent in towns and villages: four in Antwerp, three in Champion, 12 in LeRay, three in Philadelphia, seven in Watertown, and four in Wilna. A similar ratio is indicated in Lewis County, which reported 16 gristmills in 1820 and 46 sawmills (Burr 1829).

Road building also attended the development of rural industries and villages in the region. By 1806 there were 13 roads surveyed in LeRaysville, and by 1808, a road connected LeRaysville with Evans Mill. Within five years, the St. Lawrence Turnpike was constructed through Wilna (Klein et al. 1985:2-20). The road forked; the Ogdensburg Turnpike went through Antwerp, and the St. Lawrence continued through Lewisburg and Diana Township (Map entitled "Parts of Jefferson and Lewis Counties", n.d. [ca. 1800-1810?], New York State Department of Tax and Finance, No. 241).

WOODS MILLS

The presence of a good water power site, and its exploitation for rural industrial purposes, appears to have been the catalyst for the emergence of Woods Mills (also known as Woods Settlement), in the far northern corner of the town of Wilna, as a village community. The village derived its name from Jonathan Wood, who came to Jefferson County from Oneida County in 1833, at the age of 41 (Child 1890:858). In 1836, Wood purchased 85 acres on the Indian River from John Lafarge (Jefferson County Deeds (hereinafter JCD) W2:407) and in 1839 an additional 246 acres (JCD H3:129). These transactions included land on both sides of the river, and in view of subsequent history were evidently selected with an eye toward the power potential of the river at this location, as Wood had erected a dam, creating a slackwater (described as a mill pond in 19th century deeds), by 1847 (JCD 84:489). The earliest map to provide particulars about the village of Woods Settlement is dated 1855, at which time a sawmill, schoolhouse and Methodist Episcopal church were indicated (Shields 1855). By 1864, according to Beers' map of that date, the village's industrial base had grown to include two sawmills, a grist mill, a cooper shop, a blacksmith shop and a wheelwright stop. At least one of the sawmills, as well as the grist mill, was in operation over 20 years later (Robinson 1888). In 1890, the village was described as having a church, grist mill, saw mill, two butter tub factories, a blacksmith shop and "about 16 dwellings" (Child 1890:843). Eight years later, the village was characterized as "a small hamlet" which by that time had a store and post office, both operated by a Jason Merrick (Emerson 1898:852).

The subject of this documentation, the remains of a grist milling operation, thus represents only one of a number of entrepreneurial activities supplying, and supplied by, the surrounding rural agricultural area, which fostered the establishment of the village and sustained its identity as a rural community through the 19th and into the 20th century.

Research into deeds associated with the grist mill property also suggests the authority by which an initial owner/developer of a water power site, even at the small scale represented at Woods Settlement, could control the nature and extent of industrial activity at a given location. In 1847, Jonathan Wood sold 90 acres of land, including tracts on both sides of the Indian river upstream from the dam, to one Asaph Burdick. For himself, however, Wood reserved the right to "keep up or erect a dam...where said dam now is for carrying a sawmill and other machinery" (JCD 84:489). In 1852, Wood conveyed a very small (1/10 acre) parcel on the north bank of the river at the dam to one of his sons-in-law, Reuben Randall (JCD 108:512). This lot

was subsequently developed as a "joinery shop", which Wood re-acquired in 1855 along with the "privilege or right of drawing water...equal to 100 square inches under a 9 foot head". This privilege was identified as the "third privilege", the first and second still held by Wood for a grist mill and saw mill, respectively (JCD 122:186).

From at least 1850 to 1852, Wood appears to have run saw+ and grist-mill operations in partnership with Lucius Clark, to whom Wood had sold a one-third interest in the enterprise (Jefferson Co. Probate Records, C:15, file #73). These milling activities appear to have been located downstream from the site that is the subject of this report, and were powered from a canal extended off the south end of the dam (evidence of which still remains). In the latter year, however, Clark was killed in a milling accident, and the following year his wife sold his 1/3 shares in the operations back to Wood. This transaction was not formally recorded until 1861, at which time Wood, reserving "the first privilege of water for a grist mill," the sawmill site, consisting of approximately 2 acres, plus "the second privilege for a sawmill" to Amasa Aldrich (JCD 149:31). The "privilege" granted to Aldrich (which included one-half of the balance of water power not previously conveyed with the "joinery shop" lot) also carried responsibilities -- specifically to bear half the cost of maintenance and repair of the dam "for the benefit of said mills."

With this sale to Aldrich, Jonathan Wood remained in possession of one of the three "rights" to the water power obtainable from his dam and mill pond. This "first privilege" also included the "right and title to enforce or cause parties owning the second [sawmill] and third [joinery/cooper shop] privileges to build and keep in repair their share of the dam..." (see JCD 199:276). In 1874-75, about four years before his death, Jonathan Wood finally sold his grist mill and attendant privilege to Alonzo and Simon Wood (JCD 199:276; 221:392; 221:393). The Woods (relation to Jonathan unknown) continued to operate the mill, until selling it to John Cline in 1882 (JCD 243:461). The property returned to Jonathan Wood's family, in the person of his grandson, Harlan, in 1894, who is reported to have operated it as late as 1898 (JCD 284:229; Emerson 1898:852).

The original construction date of the mill building which is the subject of this documentation cannot be precisely determined based on available information. Published histories of Jefferson County (Child 1890:858; Emerson 1898:852) simply state that Jonathan Wood came to Jefferson County in 1833 and (date unspecified) built "a grist and saw mill", a characterization that could indicate either a combined operation or two separate production facilities. In Wood's 1847 deed to Asaph Burdick (JCD

84:489), Wood's reservation of water privilege was described as being for "a sawmill and other machinery"; while his interest in a sawmill is clear, it is not clear what might have been meant by "other machinery". The earliest industrial census in which Wood is featured is that of 1850, at which time, under the name Wood, Clark and Co. he was operating a sawmill that had an annual production of 600,000 feet of "planks and boards" with a value of \$2400. The sawmill, with its associated power canal from the dam, is mentioned in an 1852 deed for an adjacent tract (see JCD 107:379). Thus, it appears that the Wood-Clark milling operation was located east of the bridge. That the Wood and Clark partnership did, however, include grist milling is indicated by the manner of Clark's death in 1852, which occurred as a result of his being "caught and crushed in the machinery of a grist mill -- a natural death" (Jefferson County Probate Records, C:15). In the 1855 censuses for both population and industry, Wood is listed as owner only of a "joinery shop," the operation he acquired that year from his son-in-law Reuben Randall. In 1860, however, Wood was finally linked in the federal industrial census to a specific grist milling operation: at that date Wood and another son-in-law, Jerome Stevens, were associated in a "flour mill," grinding wheat and "other grain" to produce 700 bushels of flour annually. Since Wood sold the original sawmill site, east of the bridge, to Amasa Aldrich in 1861, it is therefore concluded that the mill that is the subject of this documentation was built, specifically for the grinding of grain and corn between about 1855 and 1860.

The next mention of the grist mill occurs in the 1880 Federal census, by which time the enterprise was operated by Alonzo Wood with two employees. The mill was then described as having two runs of stone and three center discharge wheels, or turbines, of 5-foot breadth, 36 horsepower and 100 rpm. Products included 80 barrels of wheat flour, 20 barrels of rye flour, 600 pounds of buckwheat flour; the bulk of the operation, however, was clearly devoted to production of cornmeal (56,000 lb.) and "feed" (60,000 lb.). According to this census, only one-tenth of the output was considered custom work, the remainder being market, or retail. By 1890, Alonzo Wood had sold the mill to John Cline, and as described that year the enterprise had three runs of stone and a "turning lathe also connected with the mill" (Child 1890:843). Under Harlan Wood, who acquired the business in 1894, the mill was in operation at least until 1898 (Emerson 1898:852). The large amounts of concrete present in the remains of the dam, gate structure and mill ruins also point to the continued utility of the enterprise, perhaps into the 20th century.

BIBLIOGRAPHY AND REFERENCES CITED

Interview:

Telephone interview between John R. Bowie and Stephen J. Kindig, molinologist, Oley, Pennsylvania, January 13, 1989.

Primary and Published Secondary Sources:

Beers, S.N.

1864 New Topographical Atlas of Jefferson County, New York.
C.K. Stone, Philadelphia.

Burr, David H.

1829 An Atlas of the State of New York. David H. Burr, New York. On file at the New York Public Library, New York.

Child, Hamilton

1890 Gazetteer of Jefferson County, New York 1684-1890.
Syracuse Journal Co., Syracuse, New York.

DeLaire, Karen

1977 Potential Significant Historical Sites Within the Installation of Fort Drum. Manuscript on file at Fort Drum, Office of Environmental/Energy Division.

Emerson, Edgar C.

1898 Our County and its People: A Descriptive Work on Jefferson County, New York. Boston History Co., Boston.

Friedlander, Amy; Charles H. LeeDecker and Robert Foss

1986 Re-Evaluation of Rural Historic Contexts for the Fort Drum, New York, Vicinity. Fort Drum Cultural Resources Project, Report No. 2, 1986. Prepared for the U.S. National Park Service, Mid-Atlantic Region, Philadelphia, by the Cultural Resource Group, Louis Berger & Associates, Inc; funded by the 10th Mountain Division, Fort Drum, New York.

Friedlander, Amy and Alain Outlaw

1988 A Report on the Rural Village and Iron Industry Historic Contexts, Fort Drum, New York Vicinity. Fort Drum Cultural Resources Project, Task Order 15, 1988. Prepared for the U.S. National Park Service, Mid-Atlantic Region, Philadelphia, by the Cultural Resource Group, Louis Berger & Associates, Inc.; funded by the 10th Mountain Division, Fort Drum, New York.

Gould, Ernest C., comp.

1955 Jefferson County Sesqui-Centennial Program and
Historical Almanac, 1805-1955. Watertown, New York.

Hough, Franklin B.

1854 History of Jefferson County, New York. Joel Munsell,
Albany.

Jefferson County Deed Records

1836- On file at Jefferson County Courthouse, Watertown, New
1942 York.

Klein, Joel I., Cara Wise, Margaret Shaeffer and Sydne B.
Marshall

1985 An Archaeological Overview and Management Plan for Fort
Drum. Prepared for National Park Service, Mid-Atlantic
Region by Envirosphere Company, New York.

Powell, Thomas F.

1976 Penets Square: Episodes in Early History of Northern
New York. Northcountry Books, Lakemont, New York. On
file at the New York Historical Society, New York.

Robinson, E.

1888 Robinson's Atlas of Jefferson County, New York. E.
Robinson, New York.

Shields, J.B.

1855 Jefferson County, New York. J. B. Shields,
Philadelphia.